

**EPI Update for Friday July 7, 2006**  
**Center for Acute Disease Epidemiology**  
**Iowa Department of Public Health**

*Items for this week's EPI Update include:*

- **Avian influenza update**
- **Shigellosis in child care**
- **Summer fun at fairs**
- **Meeting announcements and training opportunities**

**Avian influenza update**

As of July 4, the World Health Organization (WHO) has confirmed 229 cases of H5N1 avian influenza in humans, including 131 deaths in 10 countries (Asia, Europe and Africa).

Recently, a WHO team of experts investigated a “family cluster” of seven human cases of H5N1 avian influenza that occurred in Sumatra, Indonesia. Although six of the family members had no known direct contact with sick birds, the first death in this family of seven was a woman who sold vegetables in a market that also sold live birds. The family members in this cluster also had a banquet in late April 2006, when the woman was ill and coughing heavily. Some of the family members also spent the night in a very small room with the woman and cared for her. The investigation confirmed that five family members had identical strains of H5N1 and that transmission probably occurred due to the prolonged, very close direct contact family members had with the first woman who became ill. This strain is identical to the strain previously isolated from birds, including poultry, throughout Indonesia. The WHO team also found that the virus did experience a minor mutation in the 6th victim (the 10-year-old boy in the family), and the boy apparently passed this mutated virus to his father. The WHO experts have concluded that the minor mutation that occurred with this strain is a normal and expected occurrence for influenza viruses (antigenic drift), and that the minor mutation did NOT cause the virus to become more easily transmitted from one person to another.

To date, the H5N1 avian influenza virus still remains predominantly a disease that affects birds, including poultry, with humans occasionally infected due to very close direct contact with birds that are ill and/or dying from H5N1 avian influenza. For more information on the WHO teams' findings, visit [www.who.int/csr/disease/avian\\_influenza/en/](http://www.who.int/csr/disease/avian_influenza/en/)

To view maps displaying locations of H5N1 avian influenza activity in birds and humans, visit <http://gamapserver.who.int/mapLibrary/app/searchResults.aspx>.

**Shigellosis in child care**

Between May 5 and June 28, 10 laboratory confirmed cases and 11 probable cases of *Shigella* have been reported from northwest Iowa. Ages range from 2 to 65 years of age, with seven of the confirmed and eight of the probable cases being 7 years old or younger. Symptoms due to *Shigella* include diarrhea, cramps, fever and some vomiting.

*Shigella* bacterial isolates should be sent to UHL as rapidly as possible for DNA fingerprinting (pulsed field gel electrophoresis or PFGE). This information aids in identifying individuals related to outbreaks and in follow-up investigations done to detect and prevent further illness in Iowa. If the local laboratory does not test for *Shigella*, stool specimens can be sent to UHL for identification.

Due to the low infectious dose (only 10-100 organisms), shigellosis can spread easily and quickly throughout a community.

Good basic hand washing is essential and most important for involved individuals, families and care givers. Anyone with diarrhea should stay home from day care, school or work AND should not go into wading or swimming pools.

Most children with diarrhea can be treated with rehydration and symptomatic treatment. The decision to treat with antimicrobial therapy should be made on a patient-by-patient basis ([See www.cdc.gov/mmwr/preview/mmwrhtml/rr5002a1.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5002a1.htm)). Remember, treating some diarrheal illnesses with antibiotics can increase the risk of complications (such as HUS after *E. coli* O157 infection.)

Even when a bacterial cause is suspected in an outpatient setting, antimicrobial therapy is not usually indicated among children because most cases of acute diarrhea are self-limited and their duration is not shortened by the use of antimicrobial agents. Exceptions to these rules may be considered according to:

- Special needs of individual children (e.g., premature infants or children who are immunocompromised or have underlying disorders).
- Suspicion of sepsis.
- An outbreak of shigellosis, cryptosporidiosis, or giardiasis to lessen the risk of transmission.

Anti-emetic medications and antimotility agents should generally be avoided.

Cases of shigella should be reported to your local health department and to the state health department at 800-362-2736 or faxed to 515-281-5698.

### **Summer fun at fairs**

Recently, a cluster of 11 cases of *E. coli* O157:H7 were reported in central and western Iowa. Most cases are children between the ages of 1 and 7. Potential sources of infection include raw ground beef, a petting zoo, and directly from one child to another.

Tips for parents include:

- Keep trash and all food waste in a restricted cabinet or out of the reach of young children.
- After touching animals at petting zoos or farms, wash hands immediately.
- Always cook meat thoroughly.
- Children under the age of 5 should not handle reptiles, including turtles, snakes and lizards; reptiles should not be kept in a home with children under the age of 5.
- Do not allow anyone with diarrhea to swim in any body of water, including “kiddie” pools, swimming pools or lakes.

There have been illnesses linked to both a petting zoo in Florida and a state fair in North Carolina. Please refer to the Centers for Disease Control and Prevention (CDC) Morbidity and Mortality Weekly Report at [www.cdc.gov/mmwr/PDF/wk/mm5450.pdf](http://www.cdc.gov/mmwr/PDF/wk/mm5450.pdf). For more information on staying healthy at animal exhibits this summer, visit [www.cdc.gov/healthypets/spotlight an exhbts.htm](http://www.cdc.gov/healthypets/spotlight_an_exhbts.htm).

Also, in March 2005, the National Association of State Public Health Veterinarians, in partnership with the CDC published guidelines on preventing disease associated with animals in public settings. The guidelines are available at [www.cdc.gov/mmwr/PDF/rr/rr5404.pdf](http://www.cdc.gov/mmwr/PDF/rr/rr5404.pdf).

### **Meeting Announcement and Training Opportunities**

None this week.

**Have a healthy and happy week!**  
**Center for Acute Disease Epidemiology**  
**Iowa Department of Public Health**  
**800-362-2736**